

Claims

What is claimed is

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1. A method for fabricating a 3D display screen suitable for the autostereoscopic display of images from a 2D display screen (3) originally designed for two-dimensional image display which is provided with an image display surface (5) and a front bezel (7) framing the image display surface (5),

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characterized by the following process steps:

- Removing the front bezel (7) from the 2D display screen (3),
- Attaching an adapter provided with an optical assembly for separating an image displayed on the image display surface (5) into stereoscopic partial images, so that the optical assembly covers the image display surface (5),
- 15 - Aligning the optical assembly relative to the image display surface (5) so that at least one stereoscopic partial image reaches one eye and at least one other stereoscopic partial image reaches the other eye of an observer, who thus has a stereoscopic vision of the image displayed.

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2. A method as claimed in Claim 1, characterized in that the alignment of the optical assembly with the image display surface (5)

- is effected by varying the position of the optical assembly jointly with the frame (2) relative to the image display surface (5), or
- by varying the position of the optical assembly relative to the image display surface (5) and to the frame (2).

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3. Method according to Claim 1 or 2, characterized in that the alignment of the optical assembly is carried out as follows:

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- Display of a test image on the image display surface (5), in which the test image preferably is an image combined from n ($n \geq 2$) views arranged in rows and/or columns, and in which exactly $(n-1)$ of the views correspond to a completely black area each and exactly one view corresponds to a completely white or completely blue or completely green or completely red area,
- continuous displacement of the position of the optical assembly relative to the image display surface (5), with simultaneous visual or opto-electronic inspection
- 35 of the monocular images from an arbitrary but permanent monocular viewing po-

sition until the said displacement has led to such a position of the optical assembly relative to the image display surface (5) in which

- a white area of maximum extension, or
 - a blue area of maximum extension, or
 - 5 - a green area of maximum extension, or
 - a red area of maximum extension
- is visible in the monocular image seen from the monocular viewing position.

10 4. Method as claimed in any of the above Claims, characterized in that the front bezel (7) removed in the first process step, or a separately made front bezel, is attached so that it covers the marginal zone of the adapter.

15 5. An adapter for making a 3D display screen suitable for autostereoscopic image display from a 2D display screen (3) originally designed for two-dimensional image display, as claimed in the above method claims, in which the 2D display screen (3) is provided with an image display surface (5) and a front bezel (7) framing the image display surface (5), comprising:

- a frame (2) whose geometric extension parallel to the image display surface (5) approximately equals the extension of the front bezel (7) of the 2D display screen (3),
- 20 - a front pane (1) provided with an optical structure in the form of an array of wavelength filters or lenticulars or in the form of a barrier screen, that effects the separation of an image displayed on the image display surface (5) into stereoscopic partial images, thus implementing image separation for autostereoscopic display, in which
- 25 - the margin of the front pane (1) is connected to the frame (2) by means of fastening.

30 6. An adapter as claimed in Claim 5, characterized in that the optical structure is designed as a wavelength filter array (9) laminated to or printed on the front pane (1).

35 7. An adapter as claimed in Claim 5 or 6, characterized in that the means of fastening the front pane (1) to the frame (2) are metal spring clips or an adhesive joint (8).

8. An adapter as claimed in any of the Claims 5 through 7, characterized in that the frame (2) consists of a material having two adhesive surfaces, with one adhesive side being used for fixation to the outer rim of the screen and the other adhesive side holding the front pane.
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9. An adapter as claimed in any of the Claims 5 through 8, characterized in that the frame (2) is provided with a profile depth of preferably between 2 mm and 30 mm, so that the front pane (1) including the optical structure that effects image separation is held at a defined distance from the image display surface (5), this
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10. Adapter frame as claimed in any of the Claims 5 through 9, characterized in that the front pane (1) consists of shatterproof glass and is provided with a planar, electrically conductive structure that shields observers from electromagnetic
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- radiation.